

**REMARKS**

Presently claims 191-198, 231-233, 236-240, 252 and 260-267 are pending in the application. Claims 170-190, 199-230, 234, 235, 241-251, 253-259 and 268-320 have been canceled. Claims 194, 195, 236, 239, 240, 252, 263 and 264 have been amended to more particularly point out the present invention. Support for the amendments to claims 194, 195, 236, 239, 240, 252, 263 and 264 may be found, for example, in original claims 194, 195, 236, 239, 240-243, 252, 263 and 264, Figs. 9A-9F and at page 27, line 17 – page 29, line 25 of the specification. Accordingly, no new matter has been added to the application by the foregoing amendments.

***Prior Art Rejection – § 102(e)***

The Examiner has rejected claims 170, 171, 176, 177, 182-185, 189, 199-202, 206, 216, 218, 220, 221, 228, 230, 239, 240, 242, 250, 251-254, 258, 272, 283, 284, 289-297, 311, 312 and 319 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,177,931 to Alexander *et al.* (“Alexander”). The Examiner contends that Alexander discloses all elements of the present invention. Applicants respectfully traverse this rejection.

Alexander teaches improvements to electronic program guides (“EPGs”), including viewer interaction capabilities, opportunities for advertisers to reach viewers and the creation of viewer profiles. Alexander’s system allows the viewer to interact with the EPG, including selecting programming (including advertisements) for viewing and/or recording. The user may also interact with the EPG by scrolling through the listings which are not displayed on the initial screen. The EPG in Alexander collects information about the viewer, either by obtaining the requested information directly from viewer input or learning the desired information by recording the viewer’s “actions and circumstances surrounding those actions” with the EPG (see column 28, lines 30-59 of Alexander). The information that the EPG records includes instructions provided to the EPG (e.g., a channel change) as well as the time that that change was requested and the

programming switched to and from as a result of the change. The EPG also records the absence of user interaction. Alexander teaches that a “viewer profile analysis program” performs a “simple statistical analysis” of the collected data and, combined with the viewer’s profile information, develops “viewer characteristics” (see column 29, lines 30-60 of Alexander). The profile analysis program also compares one viewer profile to other viewer profiles to further aid in displaying similar content to similar viewers. Alexander then uses the viewer characteristics to customize the EPG, so that the viewer is presented with programming and/or advertisements that are likely to be of interest, both in terms of content and order of display. Alexander also teaches that the EPG may display advertisements based on specific programming that the viewer is currently watching or that certain advertisements may be assigned to particular “classes” of programming.

Applicants’ invention includes monitoring subscriber selections (or lack thereof) with a multimedia device and then generating certain interaction data about the subscriber based on those observed or collected interactions. The subscriber selection data could be determined for a single “session” or averaged over multiple sessions. For example, subscriber interaction data might include calculated parameters such as rate of channel change and/or average volume level. The subscriber selection data is processed, based on heuristic rules, to create a subscriber profile.

For a rejection under § 102(e) to be proper, a reference must disclose, either explicitly or inherently, each and every element of the claimed invention. Applicants respectfully submit that Alexander does not teach each and every element recited in independent claim 231.

Independent claim 231 recites:

A method for generating a subscriber profile for a subscribed user of television programming, the method comprising:  
  
monitoring user viewing activities;

collecting subscriber selection data based on source material selected by the user over a predetermined period of time; and

processing the subscriber selection data to create a subscriber profile, wherein said processing the subscriber selection data includes processing subscriber selection data based on a predetermined set of heuristic rules.

Applicants respectfully submit that Alexander does not disclose the use or application of “heuristic rules”.

### 1. Ordinary Meaning of “Heuristic Rules”

Absent a clear definition in the specification, the words of a claim must be given their plain meaning. “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application.’ *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) (*en banc*)...The ordinary and customary meaning of a term may be evidenced by a variety of sources..., including: the claims themselves...dictionaries and treatises...and the written description, the drawings, and the prosecution history.” *See* MPEP 2111.01.

The ordinary meaning of the term “heuristic” is “involving or serving as an aid to learning, discovery or problem solving by experimental and esp. trial-and error methods; *also*: of or relating to exploratory problem-solving techniques that utilize self-educating techniques (as the evaluation of feedback) to improve performance” (*Webster’s New Collegiate Dictionary*, 9<sup>th</sup> ed.). Thus, one skilled in the art would understand the term “heuristic rules” to mean one or more rules that are determined from learning, discovery, experiments, trial and error, inferences, educated guesses, market studies, human knowledge, experience or calculations. Such concepts are fully supported in the present application. Based on the description and use of the term “heuristic rules” in the specification, Applicants further submit that the term “heuristic rules” and the application thereof as used in the present application is consistent with the ordinary meaning of the

term as known to one skilled in the art. Accordingly, one skilled in the art would recognize that Alexander does not teach or suggest the use of “heuristic rules” as recited in the present claims.

## 2. Alexander teaches Statistical Analysis – not Heuristic Rules

Alexander utilizes a “Profile Program” that “performs multiple levels of sophisticated analysis and learning involving numerous comparisons...to develop of multi-dimensional profile of the viewer” (Alexander, column 30, lines 1-7). However, the data used by the Profile Program in Alexander is based on a “simple statistical analysis” and “basic viewer profile data” (see column 29, lines 36-37 and lines 55-57 of Alexander). The “statistical analysis” used by Alexander’s Profile Program to develop the viewer profile does not apply rules that are based on “exploratory problem-solving techniques that utilize self-educating techniques.” Thus, the use of statistical analysis to generate information (e.g., the viewer profile) is different than using *heuristic rules* to develop similar types of information.

As the Examiner points out at page 7 of the Office Action, Alexander indicates that the “Profile Program ‘learns’ to recognize a finer breakdown about the various types of data collected...” (see column 29, lines 55-59). However, such a statement does not teach that heuristic rules are being applied in Alexander. Rather, the above passage of Alexander simply suggests that the Profile Program is equipped to finely analyze the collected data, such that specific interaction data of an individual user may be compared to ascertain a pattern for that viewer. Such fine statistical analysis does not teach or suggest the development, use or application of a heuristic rule. Accordingly, Applicants respectfully submit that the Examiner’s conclusion that it would have been obvious to include heuristic rules with Alexander’s statistical analysis is unfounded.

Moreover, Alexander’s statistical approach is based purely on a mathematical analysis, whereas heuristic rules are rules that are used to infer or derive something from the data that could not be calculated, determined or observed directly from a statistical (or

other) analysis of the data. Stated differently, heuristic rules inherently include some non-mathematical operation or element. The fact that Alexander discloses that the viewer characteristics that form the viewer profile are developed “over time,” and “with sufficient data,” is consistent with the use of statistical analysis, but not necessarily with heuristic rules. That is, although the development and/or application of heuristic rules may include some mathematical analysis, such elements are not *essential* to a heuristic rule. Simply because the conclusion resulting from the application of one type of analysis (e.g., statistical) and heuristic rules is the same, does not mean that the type of analysis is the same. Thus, the mere fact that Alexander’s discussion of the Profile Program includes examples of how statistical analysis and the various data points utilized therein are applied, does not disclose, teach or suggest the use of “heuristic rules”.

In contrast, in independent claim 231, heuristic rules may be composed of both logical heuristic rules and heuristic rules expressed in terms of conditional probabilities are (see, for example, page 19, lines 10-16 and page 28, line 28 – page 29, line 25 of the specification). Thus, Alexander does not teach or suggest processing subscriber selection data “based on a pre-determined set of heuristic rules,” as recited in claim 231. Accordingly, Alexander does not teach or suggest all of the features of independent claim 231.

Independent claims 191 recites “means for storing a set of heuristic rules,” and “processing said subscriber selection data with respect to said program characteristics vector and said set of heuristic rules to form said subscriber profile vector....” Independent claim 260 recites “processing the subscriber selection data with respect to the program characteristics vector and the set of heuristic rules to generate the subscriber profile vector....” Similarly, independent claim 196 recites “processing said subscriber selection data with respect to said set of heuristic rules to form said household demographic characteristics vector....” Independent claim 265 recites “processing the subscriber selection data with respect to the set of heuristic rules to generate the household demographic characteristics vector....” For the same reasons discussed above with respect to independent claim 231, Applicants respectfully submit that Alexander does not teach or suggest all of the features of independent claims 191, 196, 260 and 265.

Independent claim 236 recites “processing the subscriber selection data to create a subscriber profile, wherein the subscriber profile is a demographic profile that provides predictive values of the age, income, and gender of the user.” Applicants respectfully submit that Alexander does not disclose, teach or suggest providing a “predictive value” of demographic characteristics of a user, based on the subscriber selection data. Although Alexander may use a statistical analysis to form a viewer profile that incorporates Viewer Preferences, there is no disclosure in Alexander that such profile or preferences includes a “predictive values” that a subscriber has a certain characteristic. Accordingly, Alexander does not teach or suggest all of the features of independent claim 236.

Independent claims 239 and 240 recite the creation of a subscriber profile that includes “predictive values of household” program and product interests, respectively. Similarly, independent claim 252 recites a subscriber profile that “includes predictive values of household demographics.” For the same reasons discussed above with respect to independent claim 236, Applicants respectfully submit that Alexander does not teach or suggest all of the features of independent claims 236, 239, 240 and 252.

Claims 170, 171, 176, 177, 182-185, 189, 199-202, 206, 216, 218, 220, 221, 228, 230, 242, 250, 251, 253-254, 258, 272, 283, 284, 289-297, 311, 312 and 319 have been canceled. Reconsideration and withdrawal of the Examiner's rejection of claims 170, 171, 176, 177, 182-185, 189, 199-202, 206, 216, 218, 220, 221, 228, 230, 239, 240, 242, 250, 251-254, 258, 272, 283, 284, 289-297, 311, 312 and 319 over Alexander are respectfully requested.

#### ***Prior Art Rejection – § 103(a)***

The Examiner has rejected claims 170, 171, 176, 177, 182-185, 189, 199-202, 206, 216, 218, 220, 221, 228, 230, 238, 239, 240, 242, 250, 251-254, 258, 272, 283, 284, 289-297, 311, 312 and 319 under 35 U.S.C. §103(a) as being unpatentable over Alexander. The Examiner has also rejected claims 170-320 as being unpatentable over

Alexander. Although these Applicants do not understand the duplicative nature of these rejections, the rejections with respect to claims 170-190, 199-230, 234, 235, 241-251, 253-259 and 268-320 are moot in view of the cancellation of these claims. With respect to the remaining claims, Applicants respectfully traverse these rejections.

As discussed above with respect to the Examiner's anticipation rejection over Alexander, Applicants respectfully submit that Alexander does not teach or suggest all of the features of independent claims 191, 196, 231, 236, 239, 240, 252, 260 and 265. Thus, independent claims 191, 196, 231, 236, 239, 240, 252, 260 and 265 are believed to be allowable over Alexander.

Furthermore, because the Examiner has simply stated that the claimed features of updating profiles based on average viewing sessions (see page 6 of the Office Action), having hardware on either the client or server side (see page 7 of the Office Action) and using/combining heuristic rules with statistical analysis (see page 7-8 of the Office Action) are obvious in view of Alexander without producing any additional prior art reference to meet the burden of establishing a *prima facie* case of obviousness, the Examiner's rejections are tantamount to taking Official Notice that Applicants claimed invention is obvious. That is, since there is no reference which the Examiner relies on to show that the claimed invention is obvious in view of Alexander, the Examiner has, *de facto*, taken Official Notice that the noted features are well known in the art. However, Applicant disagrees that there are "facts outside the record which are capable of instant and unquestionable demonstration as being 'well-known' in the art," as required by MPEP 2144.03, which would support an Examiner's finding of Official Notice. Therefore, to the extent the Examiner's assertion is tantamount to Official Notice of what is known in the art of enlarging digital images, and pursuant to MPEP 2144.03, the Examiner should cite a reference in support of these positions, as well as a specific teaching in such reference(s) to support a combination with Alexander.

Dependent claims 192-195, 197-198, 232-233, 237-238, 261-264 and 266-267 are allowable at least by their dependency on independent claims 191, 196, 231, 236, 260 and 265, respectively. Claims 170-190, 199-230, 234, 235, 241-251, 253-259 and 268-320

have been canceled. Reconsideration and withdrawal of the Examiner's rejection of claims 170-320 over Alexander are respectfully requested.

The Examiner has rejected claims 170-320 over Alexander in view of U.S. Patent No. 5,703,655 to Corey et al. ("Corey"). For the same reasons discussed above with respect to the Examiner's other rejections over Alexander, Applicants respectfully submit that Alexander does not teach or suggest all of the features of independent claims 191, 196, 231, 239, 240, 252, 260 and 265. Applicants respectfully submit that Corey does not teach or suggest the features missing from Alexander. Thus, even if Alexander and Corey are combinable references, such combination still does not teach or suggest all of the features of independent claims 191, 196, 231, 236, 239, 240, 252, 260 and 265. Accordingly, independent claims 191, 196, 231, 236, 239, 240, 252, 260 and 265 are believed to be allowable over the combination of Alexander and Corey. Dependent claims 192-195, 197-198, 232-233, 237-238, 261-264 and 266-267 are allowable at least by their dependency on independent claims 191, 196, 231, 236, 260 and 265, respectively. Claims 170-190, 199-230, 234, 235, 241-251, 253-259 and 268-320 have been canceled. Reconsideration and withdrawal of the Examiner's rejection of claims 170-320 over Alexander in view of Corey are respectfully requested.



***Conclusion***

In view of the foregoing amendments and remarks, Applicants respectfully submit that the Examiner's rejections have been overcome, and that the application, including claims 191-198, 231-233, 236-240, 252 and 260-267, is in condition for allowance. Reconsideration and withdrawal of the Examiner's rejections and an early Notice of Allowance are respectfully requested.

Respectfully submitted,

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